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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,240	12/02/2003	Phillip Clark	MCA-635	3523
42754	7590	05/03/2005	EXAMINER	
NIELDS & LEMACK 176 EAST MAIN STREET, SUITE 7 WESTBORO, MA 01581			MENON, KRISHNAN S	
			ART UNIT	PAPER NUMBER

1723

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/726,240

Applicant(s)

CLARK ET AL.

Examiner

Krishnan S. Menon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

Claims 1-5 and 7-13 are pending

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 9, 12 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitation of 10/1/04 in claim 1, 'discrete regions separately removable from said base' when combined with the limitations of the instant claims could be interpreted as 'separately removable discrete regions which *have sub-regions having different functionalities*', which is not supported by the original disclosure including specification, drawings and claims. Support for 'discrete regions removable from base' is there in the cancelled claim 6 and in the figures, but this cannot be stretched to the case of discrete regions which have sub-regions. Applicants' argument that the Clark ref is overcome by the amendment of claim 1 is an additional reason to arrive at this interpretation for these claims.

Applicant's quoted (on 4/14/05) section on page 17 of the specification with respect to figure 7 does to provide adequate support for the rejected element of claims

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9, 12 and 13. Claims 9, 12 and 13 as amended on 10/1/04 require that the discrete regions have sub-regions with *different functionalities* and *such discrete regions separately removable*. Discrete region 506 of figure 7 has only one type of sub-region (tubes 507). Therefore, while this disclosure is good for claim 1 (that is, discrete region 506 is separately removable), it is not good enough for claims 9, 12 and 13. Figure 7 is deficient to support claims 9, 12 and 13. Examiner could not find support for claims 9, 12 and 13 in the specification or drawing as originally filed, but since claims 9, 12 and 13 are part of the original filing, the issue of new matter came up only when claim 1 was amended to include the limitations of cancelled claim 6, with the additional limitation of 'separately removable discrete region'.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroy et al (US 5,252,294).

Claim 1: Kroy teaches a device (abstract) having a surface comprising multiple spatially discrete regions (Fig 14) having utilitarian discontinuities (abstract) having different functionalities (also col 1 lines 31-63). Discrete regions separately removable from base – see col 8 lines 1-10. Kroy does not teach the discontinuities as being

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spaced apart at 2.25 mm. However, this limitation is only a relative dimension to suit a standardized (SBS guidelines) the automation system, and has no patentable merit. In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Claim 2: Discrete regions arranged in a row (see fig 15)

Claim 3: one of the functionality is filtration – col 3 lines 30-35

Claim 4: includes a membrane – col 3 lines 35-40: permeable structures.

Claim 7: discrete regions in sealing relationship with base – col 8 lines 1-10)

Claim 8: support structure to position removable vessels – Fig 14, col 8 lines 1-10.

*Claims 9, 12, 13:* Claim 9: discrete regions having sub-regions with different functionalities; Claim 12: discrete regions having sub-regions with discontinuities different from other discontinuities within the discrete region; Claim 13: discrete regions having sub-regions selected from filter wells, wash wells, etc.: – abstract, col 1 lines 31-63, especially, *“The arrangement of suitable cavities relative to each other in the structure in the manner of a matrix or an array permits simple process control and the carrying-out of desired reactions, of desired small amounts of substance as well as their targeted treatment and examination”*, describe different functionalities in the same

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matrix. Also see figures 15-18 and claims 1 and 15, wherein claim 1 is a micromechanical structure having different functional discontinuities, and claim 15 is for several of them removably mounted on a carrier (or base).

Claim 10: discontinuities are wells: col 3 lines 58-62

Claim 11: discrete regions in columns – fig 14: columns and rows.

2. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kroy et al (US 5,252,294) in view of Sarrasin (US 5,009,780).

Kroy teaches a device (abstract) having a surface comprising multiple spatially discrete regions (Fig 14) having utilitarian discontinuities (abstract) having different functionalities (also col 1 lines 31-63); discrete regions separately removable from base – see col 8 lines 1-10 as in claim 1. Claim 5 adds the further limitation of ultrafiltration membrane for the filter, which is not taught by Kroy. Sarrasin teaches ultrafiltration membranes for the multi-well plate (see figures, col 3 lines 30-38. It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Sarrasin in the teaching of Kroy because Kroy does not teach any particular filter or membrane to be used and also if one is interested in retaining molecules of 100-2,000,000 daltons.

3. Claims 1,2 and 9-13 are rejected under 35 U.S.C. 103(a) as being anticipated by Nguyen et al (US 2003/0108453 A1) in view of Kroy'294.

Nguyen teaches a device having a surface having multiple (applicant uses the words 'multiple' and 'plurality' in the claims to mean the same; 'multiple' by Webster's

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Collegiate Dictionary, 10<sup>th</sup> Ed., means 'consisting of more than one'; the examiner therefore gives the broadest reasonable limitation to the claim, and consider 'multiple' and 'plurality' in the claims to mean as 'more than one' for examination purposes) discrete regions and sub-regions as in the instant claims: See the figure – the plate depicted can be have different regions and sub-regions, with different functionality in each region and sub-regions. For example, the plate can be divided into two regions, one to the left of the arrow 15 and the other to the right of the arrow 15. The regions have sub-regions as rows (or columns depending on how one looks at it) having wells with different functions. The functions of the wells can be storage, wash well, or cycle wells (see page 1 para 8, page 2 para 9,14 and 15). Nguyen does not teach discrete regions separately removable from base, but Kroy teaches this – see col 8 lines 1-10. It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Kroy in the teaching of Nguyen for *"The arrangement of suitable cavities relative to each other in the structure in the manner of a matrix or an array permits simple process control and the carrying-out of desired reactions, of desired small amounts of substance as well as their targeted treatment and examination"*, as taught by Kroy, col 3 lines 50-63. One would also use the teaching of Kroy in the teaching of Nguyen because of Kroy's teaching of the carrier for transportation to a plurality of stations for automated testing (see claim 15), especially for dangerous materials (col 1 lines 33-36).

### ***Response to Arguments***

Applicant's arguments filed 4/14/05 have been fully considered but are not fully persuasive.

Examiner appreciates the applicant's pointing out the typographical error in the rejection of claims 1,2 and 9-13 – 102(e) in place of 103(a) over Nguyen in view of Kroy in the previous office action.

Applicant's arguments have overcome the 103(a) rejection of claims 1-4 and 11 Mathus in view of Kroy.

Rest of the arguments were fully considered and the responses to the arguments are included in the corresponding rejections.

### ***Conclusion***

This is in response to an RCE and is made non-final due to some new grounds for rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan S. Menon  
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4/23/05

  
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